



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

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Norman H. Bangerter, Governor
Dee C. Hansen, Executive Director
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October 20, 1987

Mr. Norman Haslem
Mine Superintendent
Ziegler Chemical & Minerals Corp.
Star Route, Little Bonanza
Vernal, Utah 84078

Dear Mr. Haslem:

Re: Mining and Reclamation Plan, Ziegler Chemical Gilsonite Mines,
M/047/013, Uintah County, Utah

We received the corrected maps and form MR-8 on October 15, 1987. This material completes the plan as required by the Utah Mined Land Reclamation Act except for two items. Tentative approval of the plan is hereby issued. The two remaining items are:

1. Public Notice

We will publish a summary statement on the mine in the appropriate newspapers, and there will be a 30-day public comment period.

2. Bond

Enclosed is the engineer's estimate of \$102,600 for the bond. Please note that most of the cost is for structure removal. If you have questions on this matter feel free to call our mining engineer, Frank Filas.

A bonding package is enclosed, you can decide which method of bonding you will use. Therefore, to get this case completed we suggest you get the bonding worked out and we will publish the public notice and inform you when that is completed. You can then submit the bond and we will present the plan to the Board of Oil, Gas and Mining for approval.

Page 2
Mr. Norman Haslem
October 19, 1987

We are pleased to see this plan nearing completion.

Sincerely,

A handwritten signature in cursive script, appearing to read "Lowell P. Braxton".

Lowell P. Braxton
Administrator
Mineral Resource Development
and Reclamation Program.

vb
Enclosure
0264Q-63&64

Reclamation Bond Estimate
Ziegler Chemical and Mineral Corporation
Consolidated Mine Plan - M/047/013

by
Frank J. Filas, Reclamation Engineer

I. Mine Sites (8)

A. Structure Removal and Cleanup	\$16,416
B. Earthwork	5,962
C. Shaft Sealing	2,873
D. Revegetation	4,384
Subtotal	<u>\$29,635</u>

II. Processing Plants

A. Structure Removal and Cleanup	\$11,870
B. Earthwork	21,552
C. Revegetation	3,940
Subtotal	<u>\$37,362</u>

III. Engineering and Supervision

\$17,498

Subtotal All Areas \$84,495

IV. 10% Contingency

\$ 8,450

Total 1987 Dollars \$92,945

Total 1992 Dollars* \$102,600

The bond estimate is calculated on the basis that the Division would have to hire a contractor to reclaim the site. Equipment costs are based on current weekly Blue Book rental rates and include operator and maintenance costs. Labor costs are based on the 1987 Means Site Work handbook and include benefits and contractors profit.

*Two percent inflation for five years

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Details of Reclamation Bond Estimate
Ziegler Chemical and Mineral Corporation
Consolidated Mine Plan - M/047/013

I. Mine Sites

This bond estimate includes the following eight mine sites: Independent 3, 4, and 5; Little Bonanza 1, 3, 11, and 12; and Little Emma 7.

The bond estimate does not include the following three mine sites which are adequately bonded by State Lands and Forestry: Cottonwood 1 and 2, and Little Bonanza 8A.

A. Structure Removal

Salvage value is not allowed in Division bond calculations. It is therefore assumed that eight headframes will be dismantled and disposed of in the mined-out workings along with other onsite structures and trash. Equipment and labor to be used is according to Ziegler's bond estimate in the February 1987 submittal.

ITEM	UNIT COST	HRS.	\$COST
30 Ton Crane	134.60/HR	32	4,307
4 Laborers	23.65/HR	512	12,109
	Subtotal		\$16,416

B. Earthwork

Removal of excess gilsonite and the recontouring of eight pad areas. Equipment and labor to be used is according to Ziegler's February 1987 bond estimate.

ITEM	UNIT COST	HRS.	\$COST
Front End Loader	68.15/HR	24	1,636
Grader	80.55/HR	20	1,611
Dump Truck	63.12/HR	24	1,515
D-6 Dozer	80.00/HR	15	1,200
	Subtotal		\$ 5,962

C. Shaft Sealing

Seal eight shafts with a concrete cap.

ITEM	UNIT COST	HRS.	\$COST
32 Yds Concrete	63.00/YD		2,016
Laborer	23.65/HR	32	757
Forming Material (lump sum)			100
Subtotal			\$2,873

D. Revegetation

Revegetate approximately 11 acres with a farm tractor and disk. Assume that broadcast methods will be used with the Table 2 Seed Mix. Also assume that approximately 200 pounds of fertilizer will be applied per acre. Approximately four hours will be required to seed each of the four sites.

ITEM	UNIT COST	HRS.	\$COST
Farm Tractor with Disk	53.65/HR	32	1,717
1 Laborer	23.65/HR	32	757
Seed for 11 Acres	123.63/AC		1,360
Feritlizer for 11 Acres	50.00/AC		550
Subtotal			\$4,384

II. Processing Plants

This bond estimate includes the following onsite processing facilities: grinder, griders-solar cell, sacking plant and ore storage area, and pulverizing plant.

The bond estimate does not include the reclamation of the buildings used for offices, bathhouse, and shop. Nor does it include the reclamation of the storage building adjacent to the solar cell. These buildings are to be kept for the postmining land use.

A. Structure Removal

Assume that buildings and related structures will be demolished by a 30-ton crane with wrecking ball and the debris covered with dirt or placed into nearby mine shafts with a front end loader. Large processing equipment will be hauled offsite.

ITEM	UNIT COST	HRS.	\$COST
30-Ton Crane	134.60/HR	24	3,230
Front End Loader	68.15/HR	40	2,726
Laborers	23.65/HR	160	3,784
Tractor Trailers	53.25/HR	40	2,130
Subtotal			\$11,870

B. Earthwork

Equipment and labor to be used was compiled from descriptions on site maps. Earthwork for the storage-solar cell area was reduced to 16 hours of grader, front end loader, and dump truck time due to the fact that the building will not be removed.

ITEM	UNIT COST	HRS.	\$COST
D-6 Dozer	80.00/HR	44	3,520
Grader	80.55/HR	80	6,444
Front End Loader	68.15/HR	80	5,452
Dump Truck	63.12/HR	80	5,050
Backhoe	54.30/HR	20	1,086
Subtotal			\$21,552

C. Revegetation

Revegetation of approximately 12 acres at four sites. Assume that broadcast methods will be used and 200 pounds of fertilizer will be applied per acre. Approximately six hours will be required per site to seed and fertilize.

Page 4
Reclamation Bond Estimate
Ziegler Chemical and Mineral Corp.
September 2, 1987

ITEM	UNIT COST	HRS.	\$COST
Farm Tractor with Disk	53.65/HR	24	1,288
1 Laborer	23.65/HR	24	568
Seed for 12 Acres	123.63/AC		1484
Fertilizer for 12 Acres	50.00/AC		600
	Subtotal		\$3,940

III. Supervision

Approximately three months of engineering, site supervision, and postreclamation monitoring will be required.

ITEM	UNIT COST	HRS.	\$COST
Supervisor	33.65/HR	520	17,498
	Subtotal		\$17,498

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